

GLOBAL ACADEMY OF TECHNOLOGY, BENGALURU

(An Autonomous Institute, affiliated to VTU, Belagavi)

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Fifth Semester B.E. Degree Examination, January - 2026

Research Methodology and IPR

Time: 3 hrs.

Max. Marks: 100

Note: Answer any Five full questions, choosing ONE full question from each module.

Module - 1

- | | | Marks | CO's /
Bloom's Level |
|---|---|-------|-------------------------|
| 1 | a. Define research. What are the main objectives of research? | 4 | 1/L2 |
| | b. Differentiate between Applied Vs Fundamental Research types of research. | 8 | 1/L2 |
| | c. List the difference between Quantitative Vs Qualitative Research. | 8 | 1/L2 |

OR

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|---|--|----|------|
| 2 | a. With block diagram explain Research Process. | 10 | 1/L2 |
| | b. List the components to be considered while defining a research problem. | 5 | 1/L2 |
| | c. Explain the technique Involved in defining a research Problem. | 5 | 1/L2 |

Module - 2

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|---|---|----|------|
| 3 | a. Explain the role of literature review in research process. | 8 | 1/L2 |
| | b. Describe the steps involved in reviewing literature and developing a conceptual framework. | 12 | 1/L2 |

OR

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|---|---|---|------|
| 4 | a. Define research design. What are the features of a good research design? | 6 | 1/L2 |
| | b. Describe the various types of Research Designs. | 9 | 1/L2 |
| | c. Explain the basic three principles of experimental designs. | 5 | 1/L2 |

Module - 3

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|---|---|----|------|
| 5 | a. Define sample design. Explain the main steps of sampling design. | 10 | 2/L2 |
| | b. Differentiate between sample survey v/s census survey. | 5 | 2/L2 |
| | c. Define sampling and non-sampling errors | 5 | 2/L2 |

OR

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|---|--|----|------|
| 6 | a. Write the difference between experiment and survey. | 6 | 2/L2 |
| | b. Explain the several methods of collecting primary data, particularly in surveys and descriptive researches. | 10 | 3/L2 |
| | c. Write a short note on personal interview. | 4 | 3/L2 |

Module - 4

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|---|--|---|------|
| 7 | a. What is a hypothesis? List the Characteristics of hypothesis. | 8 | 3/L2 |
| | b. Explain the basic concepts concerning testing of hypotheses. | 8 | 3/L2 |
| | c. Write the flow diagram for hypothesis testing. | 4 | 3/L2 |

OR

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|---|---|---|------|
| 8 | a. Define interpretation. Why interpretation is required? | 4 | 3/L2 |
| | b. Explain the briefly the layout of research report. | 8 | 4/L2 |
| | c. What all precautions should be taken for writing research reports? | 8 | 4/L2 |

Module - 5

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|---|--|---|------|
| 9 | a. Define Intellectual Property Right (IPR). Also explain the fundamental principles of IPR. | 5 | 4/L2 |
| | b. List the different kinds of IPR. Why Is Utility Inventiveness Important? | 7 | 4/L2 |
| | c. Explain the detailed Procedure for granting and obtaining Patents. | 8 | 4/L2 |

OR

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|----|--|---|------|
| 10 | a. What is Copyright? What are the Conditions for Grant of Copyrights? | 6 | 4/L2 |
| | b. Explain the emerging issues in intellectual property rights. | 8 | 4/L2 |
| | c. Write a short note on challenges of intellectual property rights. | 6 | 4/L2 |

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